

BioTest Laboratories, Inc.

Mitochondrial DNA Analysis Report

Case Number	BT-02-0507-392	Report Date	05/07/2002
Offense Type	Sexual Assault/Homicide	Page	1 of 2
Submitting Agency	Anytown Police Department		
Lab Report #	0507-392		

Case Names Doe, Sandy (Victim)
 Smith, Joe (Suspect)

Evidence Receipt Items #1, 6, 7, 8, and 9 were received by Forensic Scientist, William S. Roberts on April 22, 2002 from Property.

INVOICE-ITEM

ITEM DESCRIPTION

1	Known blood sample from Sandy Doe (Victim)
6	Known blood sample from Lucy Johnson
7	Known blood sample from Carol Johnson
8	Known blood sample from Joe Smith (Suspect)
9	Pubic hair recovered from bedding

RESULTS

Mitochondrial DNA (mtDNA) sequences were obtained from item #9 (pubic hair recovered from bedding), item #1 (known blood sample from Sandy Doe), Item #6 (known blood sample from Lucy Johnson), item #7 (known blood sample from Carol Johnson), and item #8 (known blood sample from Joe Smith). The mtDNA sequences obtained from Items #1 and #9 are the same. Therefore, Sandy Doe cannot be excluded as the source of the pubic hair recovered from bedding.

The mtDNA sequences obtained from Items #6, 7, and 8 are different than the mtDNA sequence obtained from items #1 and #9. Therefore, Lucy Johnson, Carol Johnson, and Joe Smith (suspect) can be excluded as the source of the pubic hair recovered from bedding.

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Mitochondrial DNA Analysis Report

DR Number	2002-110789	Report Date	5/07/2002
Offense Type	Sexual Assault/Homicide	Page	2 of 2
Department	Police Department		
Lab Report #	02-0150-2	Approved By	A3884, A4093

RESULTS, cont.

The mtDNA sequencing results are detailed below. Results are listed as differences from the published revised Cambridge Reference Sequence (rCRS).

Specimen	9	1	6	7	8
	<i>Pubic hair</i>	<i>Sandy Doe</i>	<i>Lucy Johnson</i>	<i>Carol Johnson</i>	<i>Joe Smith</i>
Range	np 15998-16389	np 15998-16389	np 15998-16388	np 15998-16388	np 15998-16388
	16124 C	16124 C	16114 A	16114 A	
	16223 T	16223 T	16129 A	16129 A	
HV1	16319 A	16319 A	16213 A	16213 A	16319A
			16223 T	16223 T	
			16278 T	16278 T	
			16355 T	16355 T	
			16362 C	16362 C	
Range	np 49-380	np 49-407	np 49-407	np 49-407	np 49-407
	73 G	73 G	73 G	73 G	73G
	150 T	150 T	150 T	150 T	
	152 C	152 C	152 C	152 C	
HV2	263 G	263 G	182 T	182 T	
	315.1 C	315.1 C	195 C	195 C	195C
			198 T	198 T	
			204 C	204 C	
			263 G	263 G	
			315.1 C	315.1 C	

Searching the mtDNA population database currently available to the Laboratory the mtDNA sequence obtained from Items #1 and #9 has been observed in the major population groups as follows:

Group	Number of Observations	Individuals in Group	Upper Bound Frequency Estimate
African-American	0	1148	0.26%
Caucasian	0	1814	0.17%
Hispanic	0	759	0.39%

EVIDENCE DISPOSITION

At the conclusion of analysis, Items #1, 6, 7, 8, and 9 were retained in the laboratory section.